IN THE UNITED STATES PATENT & TRADEMARK OFFICE
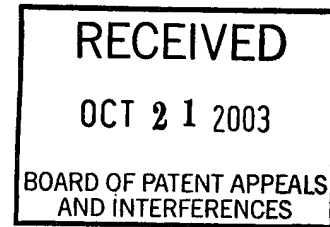
IN RE APPLICATION OF   :

TETSURO MOTOYAMA   : EXAMINER: LUU, L.

SERIAL NO: 08/738,659   :

CPA FILED: APRIL 4, 2000   : GROUP ART UNIT: 2756

FOR: METHOD AND SYSTEM FOR DIAGNOSIS AND CONTROL OF MACHINES
USING CONNECTION AND CONNECTIONLESS MODES OF
COMMUNICATION

DECLARATION UNDER 37 C.F.R. § 1.132

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

I, Carlton P. Tolsdorf, Jr., hereby declare:

1.   I am the Managing Director/ Chief Technical Officer of International

Telecommunications Initiatives, LLC., and my mailing address is 1700 Briar Ridge

Road, McLean, Virginia 22101.

2.   My academic background is as follows:

Bachelor of Electrical Engineering degree from Pratt Institute;

Master of Science degree in Systems Analysis from George Washington University;
and

Coursework toward Ph.D. in Expert Systems from George Washington University.

3. My industry experience is as follows:

I have approximately 29 years of professional experience in the Information and Telecommunications industries, with the most notable positions as follows:

International Telecommunications Initiatives, LLC., McLean, VA (1992 – Present)

Managing Director/Chief Technical Officer – Design, technology selection, integration, operations and fielding of information system and related technologies / networks (turn key) in Emerging Market Countries. Provide technical, engineering and operational expertise to the integrated financial data communication systems based upon Vsat, fiber optic transmission, switching and routing systems used in a Network for the major financial institutions of Jordan involving some 2000 remote nodes / operations; international and local area network designs. Created wireless operating businesses in the Caribbean, Pacific RIM and South America using PCS; ESMR; VSAT and International Satellite Gateway technologies.

CPT Associates, Inc., McLean, VA   (1990-Present)

President/CEO - Founded a high technology professional engineering company with specific focus on Information Technology, financial market transactions and telecommunications network design, financing, implementation /operations. Design and implementation of Information networks using VSAT technology to deliver Internet and related e-mail services in China, Middle East and for the Island Council of St Marrten. Designed and implemented multimedia network for 26 overseas and 110 domestic locations for a classified customer. Formulated professional services of CPT Associates to provide professional high technology services to major law firms in the

United States. (Arnold & Porter, Jones, Day, Reavis and Pogue, Assistant Attorney
Generals Office f Tennessee, Jackson Walker L.L.P.)

Condor Systems, Inc., McLean, VA   (1985-1990)

Director, Washington Business Development Center - Responsible for major
requirements definition, design, prototyping, development and production of
specialized systems for covert RF intercept equipment and for the AN-ALR-81
receiving system.

Central Intelligence Agency (CIA), McLean, VA   (1981-1985)

Senior Program Manager - Design, development, implementation and operations of
integrated telecommunications / information systems network supporting a $1.6B
classified program. R&D to address methods of encryption of E-mail traffic and to
develop effective methods of covert intercept of e-mail and ftp data over international
covert communication systems. Counterintelligence intercept and processing system
designs using commercial technology and modifying the printed wiring boards to add
certain covert functionality (re-transmission of electronic information, integration of
miniature surveillance devices). Design, implementation and operational support for
some 110 US missions and consulates around the globe for advanced information
systems networks (local, wide band, covert).

Naval Sea Systems Command, Arlington, VA   (1973-1981)

Senior Program Manager - Worked on Alohanet (Navy's R&D intercomputer network
for R&D centers and Operating commands), a part of the Arpanet, using email to
phase out and replace analog HF messaging methods for exchange of information
between facilities (low bandwidth) between facilities. Responsible for Undersea

Warfare acoustic sensor and related information system Research & Development directing the efforts of some 325 professionals (engineers, scientists and software developers in some $25M in projects per year).

4. I have read and understand at least the following documents pertaining to the above-identified patent application: (1) the patent application (U.S. Serial No. 08/738,639); (2) the Official Action dated January 11, 2001; (3) the Official Action dated July 18, 2000; (4) the response to the Official Action of July 18, 2000 which was filed on October 18, 2000; and (5) the latest version of the claims including added claims 68-87.

5. It is my understanding that the priority date of the above-identified patent application is June 5, 1995, the presumptive date of invention.

6. In my opinion, the invention of the above-identified patent application is in the Data Processing art and relates to the processing of email.

7. In my opinion, the level of ordinary skill in the Data Processing art is a person having at least a Bachelor's degree in the Data Processing art and at least two to three years of experience in the Data Processing art.

8. Even though my level of skill in the Data Processing art is higher than one of ordinary skill, I feel comfortable rendering an opinion on what one of ordinary skill in the Data Processing art would feel and believe at the time of the presumptive date of invention. Unless otherwise specified, the opinions set forth herein are what one of ordinary skill in the art would opine at the presumptive date of invention.
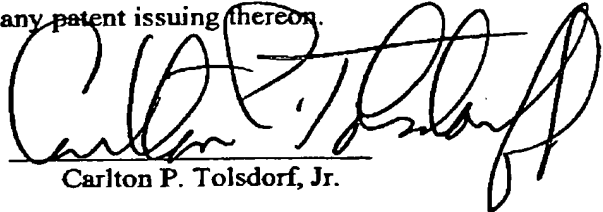
9. It is my understanding that the meaning of electronic mail may be at issue. I have been asked to prepare this declaration in order to explain what one of ordinary skill in the art at the time of the invention would consider email to be.

10. Electronic mail, commonly referred to as e-mail or email, is a manner of communicating between computing or electronic devices. An explanation of email in the 1995 time period can be found in the publication *At ease with e-mail: A handbook on using electronic mail for NGOs in developing countries*, published in 1995 by the United Nations Non-Governmental Liaison Service and The Friederich Ebert Foundation, New York. Section I: Some Practical Information on Computer Communications is attached as an Appendix to this Declaration.

11. This publication explains that e-mail is used to send messages to one recipient or to several simultaneously. It indicates that emails are sent and received through an electronic mailbox or e-mail account which is located at a host computer. Such a host computer corresponds to the "mail server" described in the originally filed patent application at page 15, lines 23-25, for example. Email can be sent locally within a network or across different networks, such as the Internet. Based on the description in the specification of the originally filed patent application, the email may be sent from a machine and it is not essential for the email to originate from a person.

12. Based on the information set forth above and my knowledge and experience with email, one of ordinary skill in the art around 1995 would consider the basic features of email at the time of the invention as follows:

(1) email is used to send messages between electronic devices;

(2) email is sent through or received from an electronic mail box or e-mail account;

and

(3) email is sent through or received from a host computer, sometimes referred to as a

mail server.

13.   I further declare that all statements made herein of my own knowledge are true and

that all statements made on information and belief are believed to be true; and further

that these statements were made with the knowledge that willful, false statements and

the like so made are punishable by fine or imprisonment, or both, under Section 1001

of Title 18 of the United States Code and that such willful false statements may

jeopardize the validity of the application or any patent issuing thereon.

May 17 2003
_____
Date

_____
Carlton P. Tolsdorf, Jr.

@t ease with e-mail

a handbook on using electronic mail
for NGOs in developing countries

Introduction

Acknowledgements

Part 1: PRACTICAL CONSIDERATIONS

Section I: Some Practical Information on Computer Communications

Section II: Computer Conferencing and Databases

Section III: Computer Networks

Section IV: Access to Computer Networks

Section V: Choosing Modems

Section VI: Choosing Communications Software

Part 2: THE BENEFITS OF COMPUTER COMMUNICATIONS

Section I: Computer Networks for NGOs

Section II: Access to Information for NGOs

Part 3: DIRECTORY OF NETWORKS

AFRICA

ASIA/PACIFIC REGION

LATIN AMERICA AND THE CARIBBEAN

To *@t ease with email* cover page

Introduction

Computer-based communications through electronic mail (e-mail), bulletin board systems, computer conferencing and networking and on-line databases offer NGOs, particularly in developing countries, a modern, effective and affordable communications toolkit with which to share information, network, conduct research and support advocacy work and campaigns on development issues.

At ease with e-mail: A handbook on using electronic mail for NGOs in developing countries, prepared by the United Nations Non-Governmental Liaison Service (UN-NGLS) and the Friedrich Ebert Foundation (New York office) is for beginners. Step by step, and in question-and-answer form, *At ease with e-mail* introduces the newcomer to the rapidly developing field of communications technology by explaining basic terms and concepts, offering advice and contacts, listing existing computer communications networks and local e-mail service providers and suggesting ways to benefit from these communication tools.

Computer and communications technology are evolving at an extremely rapid pace. At the same time, legal frameworks and regulations for telecommunications vary widely between countries. What may be legal in one country may pose problems in another. Since technical progress and legal differences are a fact of life, we have made every possible effort to provide the reader with further sources of information at the national, regional and international levels. However, readers should check the laws in their own countries.

The directory of country networks which appears in the handbook is not intended to be fully comprehensive but is, rather, a sample of some of the electronic communications services available in a range of different countries. If your country is not listed it may be that either no e-mail access provider is yet in operation (which, unfortunately, is particularly true of some parts of Africa), or that the e-mail access providers in your country did not respond to our enquiries during the preparation of this handbook. In such cases, you might contact universities, government offices or local offices of UN agencies such as the UN Development Programme (UNDP), UNICEF or local UN Information Centres. They may have e-mail connections and might be able to help you gain access. In many countries, for example, UNDP is involved in setting up electronic Sustainable Development Networks, described in Part 2, Section 1 of this handbook, which involve NGOs.

Readers should be advised that this is not a book on Local Area Networks (LANs) which connect computer users in the same organization and on the same or nearby premises. *At ease with e-mail* describes and explains the use of 'remote' computer communications and networking to bridge the gap of geographical distance. E-mail is not only useful for obtaining information from international sources or from overseas, however. At the national and regional levels, e-mail and computer networking can help build 'national' and 'regional' information resources that can be disseminated in local languages. By and large, messages and information that you send and receive locally on your own network can be in any language, although some software is limited to characters from the Latin alphabet.

At ease with e-mail: A handbook on using electronic mail for NGOs in developing countries, is available in English, French and Spanish. In this edition of the handbook, generally comprehensible information (e.g. in the directory of country networks) has been left in English. This compromise reflects the current situation in international electronic communications since most of the 'conferences,' bulletin boards, on-line databases and 'systems operators' operate in the English language.

The publishers would welcome suggestions for other language editions (and sources of funding) and any comments or observations readers may have on how possible future editions of this handbook might be updated and improved. *Welcome to the information superhighway!*

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ngls@igc.apc.org or ngls@nywork2.undp.org

Friedrich Ebert Foundation, New York
fesny@igc.apc.org or fesny@undp.org

Acknowledgements

In April 1994, the United Nations Non-Governmental Liaison Service (NGLS) compiled an Electronic Mail Directory of Service Providers in Developing Countries (with a special focus on NGO communities) and Resource Guide on Electronic Networking. In July 1994 NGLS and Friedrich Ebert Stiftung (New York) decided to update and enlarge its scope and include the material in this publication.

The book was written and edited by Jagdish Parikh of Interdoc-AsPac and Duncan Pruett of the Friedrich Ebert Foundation's New York office. The bulk of the research and compilation of material for the current publication was conducted over a four-week period with the help of many friends and colleagues around the world. Special thanks should go to the numerous readers of the book, who made many productive and helpful comments during the editing process.

This publication is in itself exemplary of the potential e-mail networking represents for sharing and cooperative exchange. In fact the degree of international cooperation that went into the creation of this report would not even have been possible without the use of e-mail!

Special thanks must go to the following individuals for their timely support, encouragement and critical commentary.

Nathan Abse (Researcher, New York Bureau, The Independent, London)
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Trevor Pruett (Bournemouth, UK)
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Raul Zambrano (Sustainable Development Network, UNDP, New York)

We are also grateful to the many network service providers throughout the developing countries of the world. They supplied necessary information and promptly responded to our survey questionnaire.

Section 1
Some Practical Information on Computer Communications

1. What are <u>computer communications</u>?
2. What is <u>electronic mail (e-mail)</u>?
3. What can I <u>send by e-mail</u>?
4. Where do I <u>get my e-mail</u>?
5. What is <u>a host computer</u>?
6. Do I <u>have to be connected to the host computer while I write my e-mail</u>?
7. What does an <u>e-mail address look like</u>?
8. What is the <u>difference between on-line and off-line use of e-mail</u>?
9. Do <u>some accounts have the option of on-line or off-line e-mail</u>?
10. Is it possible to <u>send faxes via e-mail and is it cheaper</u>?
11. How <u>secure or private are e-mail messages</u>?
12. What is a <u>virus and can it damage my computer</u>?

What are computer communications?

Computer communications, in the context of this handbook, refer to the exchange of messages and information as well as access to data sources, irrespective of physical distance, using computers and telecommunications devices, such as telephones and modems. Details on the basic equipment requirements and costs for computer communications are given in Sections <u>IV</u>, <u>V</u> and <u>VI</u>.

This handbook does not discuss communications between computers in a single office (also known as Local Area Networks or LANS).

There are three main types of computer communications:

- <u>electronic mail (e-mail)</u>,
- <u>computer conferencing</u>, and
- <u>on-line databases</u>.

What is electronic mail (e-mail)?

Electronic mail, an electronic equivalent of conventional paper mail (often referred to as snail mail), is one of the most frequent applications of computer communications. Using e-mail, people can send messages to one recipient or to several simultaneously. Delivery times range from a few seconds to a few hours, to over a day in some cases, depending on which service is used.

E-mail can be sent extremely cheaply. It can be sent to recipients locally, or to those who have e-mail addresses in other cities and countries.

What can I send by e-mail?

- text-based material (known as ASCII files) such as simple messages, letters, notes, memos, unformatted conference papers, documents;
- formatted text (any document prepared and saved as a word-processed document, such as a WordStar document or WordPerfect document with graphics, for example);
- data files, from spreadsheets or databases;
- software programs (also known as <u>'executable files'</u>).

Where do I get my e-mail?

E-mail is received and sent through an electronic mailbox or e-mail account which is located at a host computer.

What is a host computer?

A host computer is the computer from which the computer communications service is run. The host computer may also be referred to as a computer network, a bulletin board system (BBS) or an e-mail or on-line service. You connect your computer to your e-mail account at the host computer via a telephone line, as

illustrated in the diagram entitled Connecting your Computer to the Host Computer.

Do I have to be connected to the host computer while I write my e-mail?

No. You can either write your e-mail on-line or off-line. The method you use will depend on the services available, and the software supported at the host computer by your e-mail service provider.

What does an e-mail address look like?

Internet-style e-mail addresses
> This handbook refers to e-mail addresses (sometimes known as Internet addresses) a number of times. Here's how they're usually shown: first, the username of a person or organization (to the left of the @ sign, which means at); and second, the address of the host computer at which the e-mail account is located (to the right of the @ sign). Here are some examples of e-mail addresses taken from the e-mail addresses used elsewhere in this handbook:
> > sysadmin@ax.apc.org
> > 75740.535@compuserve.com
> > sysop@f1.n606.z6.fidonet.org
> > nashwa@frcu.eun.eg

Fidonet-style e-mail addresses
> Fidonet users write their addresses a different way, although Fidonet service providers are increasingly able to use Internet-style addresses. A Fidonet-style address looks like this: 6:606/1
>
> As an Internet-style address, it might look like this: sysop@f1.n606.z6.fidonet.org
>
> In fact, a number of networks have address formats which differ from the Internet-style address (although they usually have an Internet-style equivalent). Your service provider can give you further information on how to address your messages, and on what form of address you should give to partners and colleagues who want to communicate with you via e-mail.

What is the difference between on-line and off-line use of e-mail?

On-line use of e-mail means you must be connected interactively to the host computer by telephone line the entire time you are reading new e-mail or while you compose e-mail messages to send out. This way of using e-mail can be quite expensive, since you would spend more time on the telephone than you would by writing your e-mail off-line and then sending it.

Off-line e-mail allows you to write your e-mail messages before you connect to the host computer. Once you have finished writing your e-mail message, you instruct your computer to connect to the host computer. Your messages are then sent out automatically, and the messages waiting for you are automatically received by your computer before it disconnects from the host computer, allowing you to read your newly received e-mail at your leisure. Off-line e-mail lessens the amount of time spent connected to the host computer, and is therefore cheaper and more efficient.

Sending messages off-line is a more viable option in countries where there is only limited and expensive access to telephone lines. But on-line accounts still offer considerable flexibility, since they usually provide other features such as the ability to browse interactively through databases and computer conferences (or bulletin boards), which would not be available on accounts offering only off-line facilities. These features will be discussed in the next section, 'Computer Conferencing and Databases'.

Do some accounts have the option of on-line or off-line e-mail?

Yes. Some services, such as CompuServe and many Fidonet services, offer both kinds of service for the same account, and often provide software which allows for both kinds of use. It should be pointed out that on-line accounts can be used in a variety of ways. For instance, previously saved messages can be sent out once you connect. This saves on the time spent connected to the host computer when using on-line accounts.

Is it possible to send faxes via e-mail and is it cheaper?

Yes. You can send faxes locally, nationally and even internationally if your local service provider has made arrangements with other service providers abroad. Faxes sent via e-mail are not always delivered instantly, however. A fax sent via e-mail can take anywhere from a few hours to one day to reach its destination. It is best to check with your service provider on approximate delivery times.

A fax sent internationally as an e-mail message is cheaper, since you avoid the cost of an international telephone call. The e-mail service near the recipient converts the e-mail message into a fax, and sends it to the recipient at the lower cost of a local call. A few computers in the US even offer free fax services. Ask your network provider for details.

A significant limitation of most existing e-mail systems is their language capability. As discussed elsewhere in this handbook, existing communications software

provides only limited support for many languages. This can be a problem when using e-mail for faxing within a country whose language is not well-supported by existing communications software.

Using e-mail to send faxes is almost always cheaper for international communications. But before using this method for domestic communications, you need to carefully consider speed, expense, and language limitations relative to other available means.

How secure or private are e-mail messages?

No communication medium is 100% secure or private. E-mail is no exception. E-mail can be made relatively secure, however, by using such techniques as passwords, encryption programs, and so on).

What is a virus and can it damage my computer?

A virus is a program that can damage your computer system's software and data. Viruses can be accidentally introduced into your system through corrupted programs which have been loaded onto your computer. They can cause your computer to behave erratically or, in some cases, render your entire system useless. Most users exchange only simple text (ASCII), however, which cannot be infected by viruses.

Executable programs (or software) sent by e-mail, on the other hand, can transmit viruses. This is highly unlikely, however, since software made available on computer networks is usually checked thoroughly for viruses by network service providers. If you do want to check for viruses, you must get some virus-scanning software to do so. The virus-scanning procedure ensures that the program does not contain viruses or anything that might damage your computer system. Your local e-mail service provider can be a good source of advice on which virus-scanning software to use, and where to find it.